

IN THE CLAIMS:

Please amend the claims to read as follows:

1. (Currently amended) A light-emitting diode comprising:

a light-emitting element;

a lead assembly for supplying electrical power to said light-emitting element;

a metal plate, pre-formed into a concave shape, that forms a reflection mirror, said reflection mirror provided in an opposing relation to the light-emitting surface of said light-emitting element, said light-emitting element mounted a predetermined distance from a reflective surface of said reflection mirror, said concave-shaped metal plate having a design feature so that it is held in place as a stand-alone reflection mirror element in a molding die during a fabrication of said light-emitting diode;

a light-transmissible material for sealing said light-emitting element, a part of the lead assembly and the reflection mirror; and

a radiation surface for radiating light reflected on said reflection mirror to the outside,

wherein said reflection mirror comprises a metal mirror which is obtained by processing said metal plate to give it said concave shape or which is obtained by mirror-surface-treating the concave surface of said metal mirror formed by said processing of said metal plate, said radiation surface is formed on the light-transmissible material at its surface at the rear of the light-emitting element, and a through-hole is formed through said reflection mirror to serve as an air escape path during an assembly of said light-emitting diode.

2. (Canceled)

3. (Previously presented) A light-emitting diode as described in claim 1, wherein the distance from the edge of said reflective mirror to the edge of a sealing mass comprising said light-transmissible material is less than 1.0 mm.

4. (Previously presented) A light-emitting diode as described in claim 1, wherein the light-transmissible material is essentially shaped like a square when viewed from the side of the radiation surface, and the lead assembly is led to the outside from the base of the light-transmissible material close to a corner of the square.

5. (Currently amended) A light-emitting diode comprising:

a light-emitting element;

a lead assembly for supplying electrical power to said light-emitting element;

a metal plate, pre-formed into a concave shape, that forms a reflection mirror, said reflection mirror provided in an opposing relation to the light-emitting surface of said light-emitting element, said light-emitting element being mounted a predetermined distance from a reflective surface of said reflection mirror, said concave-shaped metal plate having a design feature so that it is held in place as a stand-alone reflection mirror element in a molding die during a fabrication of said light-emitting diode; and

a radiation surface for radiating light reflected on said reflection mirror to the outside,

wherein said reflection mirror comprises a metal mirror which is obtained by combining a plurality of metal plate portions to give the assembly a concave shape or which is obtained by mirror-surface-treating the concave surface of said metal mirror.

6. (Previously presented) A light-emitting diode as described in claim 5, wherein said light-emitting element, part of said lead assembly and said reflection mirror are sealed with a light-transmissible material, and said radiation surface is formed on the light-transmissible material at its surface at the rear of the light-emitting element.

7. (Currently amended) A light-emitting diode comprising:

a light-emitting element;

a lead assembly for supplying electrical power to said light-emitting element;

a metal plate, preformed into a concave shape, that forms a reflection mirror, said reflection mirror provided in an opposing relation to the light-emitting surface of said light-emitting element, said light-emitting element being mounted a predetermined distance from a reflective surface of said reflection mirror, said concave-shaped metal plate having a design feature so that it is held in place as a stand-alone reflection mirror element in a molding die during a fabrication of said light-emitting diode;

a radiation plate for radiating light reflected on said reflection mirror to the outside;

and

a case for containing said light-emitting element, a part of said lead assembly, and said reflection mirror,

wherein said reflection mirror comprises a metal mirror which is obtained by processing said metal plate to give it said concave shape or which is obtained by mirror-surface-treating the concave surface of said metal mirror formed by said processing of said metal plate, and said radiation surface is formed on a a surface of a light-transmissible material

at its surface at the rear of the light-emitting element that seals said light-emitting element, a portion of said lead assembly, and at least a portion of said metal mirror.

8. (Currently amended) A light-emitting diode comprising:

- a light-emitting element;
- a lead assembly for supplying electrical power to said light-emitting element;
- a reflection mirror provided in an opposing relation to the light-emitting surface of said light-emitting element;
- a light-transmissible material for sealing said light-emitting element, a part of the lead assembly and the reflection mirror; and
- a radiation surface for radiating light reflected on said reflection mirror to the outside, wherein said reflection mirror comprises a mirror which is obtained by processing ceramic to give it a concave shape, and said radiation surface is formed on the light-transmissible material at its surface at the rear of the light-emitting element, said concave-shaped ceramic having a design feature so that it is held in place as a stand-alone reflection mirror element in a molding die during a fabrication of said light-emitting diode.

9. (Currently amended) A light-emitting diode comprising:

- a light-emitting element; and
- a concave reflection mirror provided in an opposing relation to the light-emitting surface of said light-emitting element, light emitted by said light-emitting element being reflected on said reflection mirror, to be radiated to the outside, wherein said reflection mirror comprises a mirror which is obtained by processing a

metal plate to give it a concave shape, and said reflection mirror has a linear reflectance of 65% or higher, said concave-shaped reflection mirror having a design feature so that it is held in place as a stand-alone reflection mirror element in a molding die during a fabrication of said light-emitting diode.

10. (Previously presented) A light-emitting diode as described in claim 9, wherein said reflection mirror comprises a metal mirror which is obtained by coining a metal plate to give it a mirror-surface, and then processing it to give it a concave shape.

11. (Previously presented) A light-emitting diode as described in claim 9, wherein said metal mirror has received a mirror-surface-treatment on its concave surface.

12. (Previously presented) A light-emitting diode as described in claim 9, wherein said reflection mirror is obtained by providing a metal plate which is obtained by removing portions surrounding a part to be made into the reflection mirror, thereby preparing open spaces around that part, coining the part to expand it without being exposed to any risk of distortions which might result if it had not been for the spaces, and processing the expanded part to turn it into a concave metal mirror, or is obtained by mirror-surface-treating the concave surface of said metal mirror.

13. (Previously presented) A light-emitting diode as described in claim 9, further comprising:
a lead assembly for supplying electric power to said light-emitting element;
a light-transmissible material for sealing said light emitting element, a part of said lead

assembly and said reflection mirror; and

a radiation surface for radiating light reflected on said reflection mirror to the outside,
wherein said radiation surface is formed on the light-transmissible material at its
surface at the rear of the light-emitting element.

14. (Previously presented) A light-emitting diode as described in claim 9, wherein said reflection mirror is obtained by preparing a mirror-surface-treated planar plate, and then processing it to give it a concave shape.

15. (Previously presented) A light-emitting diode as described in claim 9, wherein the metal plate serving as a material of said reflection mirror comprises one of copper, iron, and alloys mainly composed of those metals.

16. (Previously presented) A light-emitting diode as described in claim 9, wherein the metal plate serving as a material of said reflection mirror comprises one of aluminum and alloys mainly composed of aluminum.

17. (Previously presented) A light-emitting diode as described in claim 9, wherein the metal plate serving as a material of said reflection mirror comprises aluminum or alloys mainly composed of aluminum, and said reflection mirror receives alumite treatment on its concave mirror surface.

18. (Previously presented) A light-emitting diode as described in claim 9, wherein said light emitting element emits light whose wavelength falls in the ultra-violet region.

19. (Previously presented) A light-emitting diode as described in claim 9, wherein said reflection mirror includes around its circumference a rim whose surface extends in a direction in parallel with a plane essentially perpendicular to the central axis of said reflection mirror.

20. (Previously presented) A light-emitting diode as described in claim 12, wherein a lead assembly with said light-emitting diode mounted thereupon is disposed in contact with or close to said reflection mirror.

21. (Currently amended) A light-emitting diode comprising:

a light-emitting element;

a lead assembly having a mount for mounting said light-emitting element; and

a metal reflection mirror provided in an opposing relation to the light-emitting surface of said light-emitting element, light emitted by said light-emitting element being reflected on said reflection mirror, to be radiated to the outside, said metal reflection mirror having a design feature so that it is held in place as a stand-alone reflection mirror element in a molding die during a fabrication of said light-emitting diode

wherein said mount has a recess whose mouth opens towards said reflection mirror with the center of the mouth being in alignment with the central axis of the reflection mirror, and the recess contains said light-emitting element, and a fluorescent material which converts the light emitted by said light-emitting element to light of a different wavelength.

22. (Currently amended) A light-emitting diode comprising:

a light-emitting element;

a lead assembly for supplying electric power to said light-emitting element;

a metal plate, pre-formed into a concave shape, that forms a reflection mirror provided in an opposing relation to the light-emitting surface of said light-emitting element, said light-emitting element being mounted a predetermined distance from a reflective surface of said reflection mirror, said pre-formed metal plate having a design feature to be self-supported as a stand-alone reflection mirror element in a molding die during a fabrication process of said light-emitting diode;

a light-transmissible material for sealing said light-emitting element, a part of the lead assembly and the reflection mirror; and

a radiation surface for radiating light reflected on said reflection mirror to the outside.

23-30. (Canceled)

31. (New) A method of fabricating a light-emitting diode, said method comprising:

placing a concave-shaped material as a stand-alone reflection mirror into a molding die, said concave-shaped material having a design feature allowing it to be held firmly in said molding die;

placing a lead assembly a predetermined distance away from said reflection mirror, said lead assembly including a light-emitting diode element mounted on a first lead, said light-emitting diode element electrically connected to a second lead, said lead assembly placed so that said light-emitting diode element is located substantially at a focal point of said concave

shape; and

injecting a resin into said molding die.

32. (New) The method of claim 31, wherein said material comprises one of ceramic and a metal plate.

33. (New) The method of claim 31, wherein said reflection mirror has at least one opening so that bubbles are released during said injecting of resin.